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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,558	07/16/2001	Akira Onishi	Q61341	6021

7590

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EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 03/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/904,558

Applicant(s)

ONISHI ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 and 4-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

In the present instance, claim 1 recites the broad recitation “unsaturated polyester” in lines 4-5 and in line 11, and the claim also recites “Rigolac 2004WM-2” or “Polylite TP-123” which is the narrower statement of the range/limitation.

(b) Claim 1 contain the trademark/trade names “Rigolac 2004WM-2” and “Polylite TP-123”. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe specific unsaturated polyester and, accordingly, the identification/description is indefinite.

(c) Claim 1, line 6 discloses that when 200 parts aluminum hydroxide is filled into 100 parts unsaturated polyester, the viscosity “can be” less than 200 P. The scope of the claim is confusing because it is not clear if the viscosity is actually less than 200 P or only has the potential to be less than 200 P, i.e. viscosity “can be” less than 200 P but it is not. It is suggested that “can be” is changed to “is”.

Similar questions arise in claim 1, lines 14-15 which discloses that the curing time until the viscosity becomes immeasurable due to the curing of the resin “can be” less than 20 minutes. The scope of the claim is confusing because it is not clear if the curing time is actually less than

20 minutes or only has the potential to be less than 20 minutes, i.e. is “can be” less than 20 minutes but it is not. It is suggested that “can be” is changed to “is”.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Kitayama et al. (U.S. 5,130,113).

Kitayama et al. disclose fine particle of aluminum hydroxide for filling in a resin such that when 200 parts aluminum hydroxide is filled into 100 parts unsaturated polyester known under the tradename Rigolac 2004WM-2, the viscosity is less than 1000 cP (col.5, lines 21-25, col.11, lines 22-23, col.12, lines 45-46, and col.16, lines 48-50).

Although there is no disclosure that when 150 parts fine particle of aluminum hydroxide is filled into resin composition comprising 100 parts of another unsaturated polyester and 2 parts methyl ethyl ketone peroxide, the curing time until the viscosity becomes immeasurable is less than 20 minutes, given that Kitayama et al. disclose aluminum hydroxide identical to that presently claimed as described above, it is clear that such aluminum hydroxide would inherently result in curing time until the viscosity becomes immeasurable of less than 20 minutes.

In light of the above, it is clear that Kitayama et al. anticipate the present claims.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitayama et al. (U.S. 5,130,113) in view of Oda et al. (U.S. 4,829,103).

Kitayama et al. disclose fine particle of aluminum hydroxide comprising (1) aluminum hydroxide having secondary particle size of less than 30 μm corresponding to presently claimed aluminum hydroxide Z and (2) aluminum hydroxide having secondary particle size of 40-100 μm corresponding to presently claimed aluminum hydroxide X. It is disclosed that the aluminum hydroxide Z has BET surface area of 3 m^2/g or less. The ratio of aluminum hydroxide Z/aluminum hydroxide X is 1:9 to 9:1 which clearly overlaps the amounts presently claimed and includes values which fall within the lines of the ternary composition diagram of Figures 1 and 2 as presently claimed. There is further disclosed a cured resin composition for forming artificial marble wherein the composition comprises unsaturated polyester and fine particles of aluminum hydroxide as described above wherein the resin filling viscosity is less than 800 P (col.1, lines 7-12, col.2, line 61-col.3, line 1, col.3, lines 64-67, col.5, lines 21-25, col.6, lines 1-6, col.11, lines 22-23 and 37-45, and col.17, line 26-col.18, line 5, and Table 1B).

The difference between Kitayama et al. and the present claimed invention is the requirement in the claims of BET surface area of aluminum hydroxide X.

Oda et al., which is drawn to unsaturated polyester resin composition, disclose the use of aluminum hydroxide which has BET surface area of at most 1 m^2/g in order to decrease yellowing of the resin composition, increase production, and decrease sedimentation (col.4, line 67-col.5, line 4).

In light of the motivation for using aluminum hydroxide with specific surface area disclosed by Oda et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use aluminum hydroxide X with such surface area in Kitayama et al. in

order to decrease yellowing of the resin composition, increase production, and decrease sedimentation, and thereby arrive at the claimed invention.

8. Claims 2, 4-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oda et al. (U.S. 4,829,103).

Oda et al. disclose fine particle of aluminum hydroxide comprising (1) aluminum hydroxide having secondary particle size of up to 100 μm corresponding to presently claimed aluminum hydroxide Z and (2) aluminum hydroxide having secondary particle size of 15-100 μm corresponding to presently claimed aluminum hydroxide X. The BET surface area of the mixture of the first and second aluminum hydroxide is less than 1 m^2/g . There is further disclosed a cured resin composition for artificial marble wherein the resin composition comprising unsaturated polyester and fine particles of aluminum hydroxide as described above (col.1, lines 8-11, col.2, lines 21-27 and 41-50, col.4, lines 49-51, col.4, line 65-col.5, line 1, col.5, line 64-col.6, line 7, and col.8, lines 53-61,)

The ratio of aluminum hydroxide X to aluminum hydroxide Z is 70 to 30 which falls outside the scope of the present claims which require ratio of 72.5 to 27.5 (Point δ).

It is apparent, however, that the instantly claimed ratio and that taught by Oda et al. are so close to each other that the fact pattern is similar to the one in *In re Woodruff*, 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a “slight” difference in the ranges the court held that such a difference did not “render the claims patentable” or, alternatively, that “a prima facie

case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties”.

In light of the case law cited above and given that there is only a “slight” difference between the ratio disclosed by Oda et al. and the ratio disclosed in the present claims and further given the fact that no criticality is disclosed in the present invention with respect to the ratio, it therefore would have been obvious to one of ordinary skill in the art the ratio disclosed in the present claims is but an obvious variant of the amounts disclosed in Oda et al., and thereby one of ordinary skill in the art would have arrived at the claimed invention.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kawabata et al. (U.S. 4,916,023) disclose resin composition comprising 100 parts unsaturated polyester known under the tradename PolyLite TP-123 and 200 parts aluminum hydroxide, however, there is no disclosure that when 150 parts aluminum hydroxide is filled into resin composition comprising 100 parts PolyLite TP-123 and 2 parts methyl ethyl ketone peroxide, the curing time until the viscosity is immeasurable is less than 20 minutes and further, there is no disclosure that when 200 parts aluminum hydroxide is filled into 100 parts unsaturated polyester known under the tradename Rigolac 2004WM-2, the viscosity is less than 200 P as presently claimed.

Kennedy-Skipton et al. (U.S. 4,251,430) disclose mixture of aluminum hydroxide wherein 10-30% of the particles have diameter less than 1 micron, 45-75% of the particles have

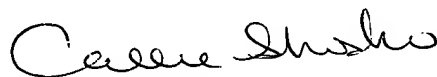
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diameter of 38-150 microns, and less than 20% of the particles have diameter of 1-38 microns. However, there is no disclosure of the BET surface area of the aluminum hydroxide as presently claimed. Further, there is no disclosure that particle diameter is the secondary particle size as presently claimed.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 703-305-0208. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Callie E. Shosho
Examiner
Art Unit 1714

CS
March 14, 2003